Montana Laboratory Sentinel

Updates from the MT Laboratory Services Bureau
800-821-7284 www.lab.hhs.mt.gov

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Important Reminder for Montana Campers…

Man falls ill from virus spread by mouse droppings

By SHARON SALYER, THE HERALD OF EVERETT

(Excerpts were taken from this story. The full article can be found at The Daily Herald, http://www.heraldnet.com and searching for "hantavirus.")

EVERETT, Wash. -- Brad Erdahl was mostly just annoyed when he discovered a rodent had gotten into his bread supply while camping, never imagining the string of events that was about to unfold.

"I got down, got a broom, and swept him out the front door," Erdhal said. He cleaned the trailer of a few mouse droppings and wiped everything down.

After he arrived back home over the weekend in Everett, Erdhal began having flu-like symptoms: Muscle fatigue. Body aches. Fever.

The symptoms intensified over the next few days. A body temperature with rollercoaster-like readings, peaking at 103 degrees then dropping to 97.

Nevertheless, the biggest clue to Erdahl's illness would come from that late-night spotting of a mouse while he was camping.

It was a deer mouse, identified by its coat of blackish-brown fur with a large white underbelly, one of several types of mice in the United States known to carry Hantavirus.

The virus begins with flu-like symptoms, just like Erdhal had.

Hantavirus is relatively rare, with only 503 cases documented in the United States since 1993, according to the Centers for Disease Control and Prevention. But more than a third - 36 percent - of those diagnosed with the disease die.

Recommendations to minimize your risk of Hantavirus infection:

- Air out cabins or shelters, check for signs of rodent infestation, and disinfect the cabins or shelters before sleeping in them.
- Do not stir up dust by sweeping or vacuuming.
- Before cleaning, spray the area wet with a mix of 1 1/2 cups of bleach to a gallon of water. This disinfects and suppresses contaminated dust. Once everything has soaked for 10 minutes, wear waterproof gloves and remove all of the nest material, trapped mice and droppings with a damp towel, then mop or sponge the area with the bleach solution. Wipe the area clean while it is damp, rather than stirring up dust by vacuuming or sweeping. Plug rodent holes with steel wool.
- Do not pitch your tent or put sleeping bags near rodent droppings or burrows, and avoid sleeping on the bare ground. Use tents with floors or bring a ground cloth.
- Keep all food and trash in rodent-proof containers. Never handle or feed wild rodents.

If you were exposed to rodents or rodent-infested buildings and have symptoms of fever, muscle aches, and severe shortness of breath, contact a medical clinic immediately.

Clostridium difficile Cases May Be Outpacing MRSA

The Washington Post (8/24, Ungar) reports, "*Clostridium difficile* (or *C. diff*), a virulent form of bacteria that doctors worry has become a new 'super bug,'" is becoming "increasingly common in hospitals and with growing resistance to antibiotics and virulence among those afflicted." What's more, "research shows that the *C. diff* bacterium rivals the better-known MRSA, or methicillin-resistant *Staphylococcus aureus*, as a source of hospital-acquired infection resistant to various drugs." In fact, a "recent study found 25 percent more *C. diff* than MRSA in 28 community hospitals in Virginia, North Carolina, South Carolina, and Georgia." The study's lead author "says she believes those statistics reflect what's happening at hospitals across the country and not just in those states."http://www.washingtonpost.com/wp-dyn/content/article/2010/08/23/AR2010082303562.html

"Waning Immunity" Contributing To Resurgence of Pertussis

Article can be found at:
http://well.blogs.nytimes.com/2010/08/16/vaccination-is-steady-but-pertussis-is-surging/?ref=health

The New York Times (8/17, Parker-Pope) "Well" blog reported that "in recent years, pertussis has made an alarming comeback -- even among adolescents and adults who were vaccinated as children." The disease is "highly contagious, spread by coughs and sneezes," and "is now epidemic in California, with 2,774 confirmed cases in 2010 -- a sevenfold increase from last year, putting the state on track for the worst outbreak in 50 years. Seven infants have died." Parker-Pope wrote, "There are several explanations for the rise in pertussis, but the most likely is waning immunity after vaccination. 'Immunity wears off, especially for adults who are decades past their most recent vaccination,' said Dr. Tom Clark, an epidemiologist with the CDC."

Living in a rural state such as ours, have you considered what you would do if someone you love were having a heart attack? Automatic external defibrillators are a simple way to save a life, even at home. Visit: http://www.heartstarthome.com/animated_demo/demo.asp for an online demonstration of the Phillips Heartstart AED.

Montana Communicable Disease Weekly Update:
This newsletter is produced by the Montana Communicable Disease Epidemiology Program.
Questions regarding its content should be directed to 406.444.0273 (24/7/365).
http://cdepi.hhs.mt.gov

DISEASE INFORMATION

Summary – MMWR Week 31 - Ending 8/07/10 – Disease reports received at DPHHS during the reporting period July 31st through August 7th, 2010 included the following:

- Vaccine Preventable Diseases: Varicella (2)
- Invasive Disease: (0)
- Enteric Diseases: Campylobacteriosis (6), Giardiasis (7), Salmonellosis (7)
- Other Conditions: (0)
- Animal Rabies: (0)
- Travel Related Conditions: Dengue Fever (1)

NOTE: The attached report has multiple pages reflecting the following information: (1) vaccine preventable and enteric diseases YTD; (2) other communicable diseases YTD; (3) cases just this past reporting week; (4) clusters and outbreaks; and (5) an STD summary.

THE "BUZZ"

http://www.fda.gov/Safety/Recalls/ucm222501.htm.

***Salmonella* clusters –** The Centers for Disease Control and Prevention (CDC), the Food and Drug Administration (FDA), and state and local partners are currently following at least three national *Salmonella* clusters. One cluster involves a major increase in a common *Salmonella* Enteritidis pulsed-field gel electrophoresis (PFGE) pattern. The increase in this PFGE pattern has been traced back to eggs distributed by an egg producer in Iowa. This includes one PFGE match from a MT resident that was handling baby poultry, but does not report eating the eggs associated with this outbreak. The egg producer has issued a voluntary product recall. The recall notice can be viewed by visiting:

The second cluster involves 49 cases from 20 states and is attributed to a different strain of *Salmonella* Enteritidis than the outbreak above. This cluster includes one case from MT with a matching PFGE pattern. *Salmonella* isolation dates range from May 16 to July 26, 2010. Currently, there is no leading source hypothesis for this outbreak.

The third cluster includes at least 12 states and 97 salmonellosis cases caused by *Salmonella* Schwarzengrund. Illness onset dates began in January, 2010. Many of the cases associated with this outbreak have identified countries other than the U.S. as their country of origin, or have a travel history to one of several Asian countries. No definitive source has been identified. As of 8/16/2010 there are no MT cases included in this cluster.

Please interview all salmonellosis, *E. coli*, and campylbacteriosis cases to help determine exposure sources. Interview tools can be found by visiting: http://www.dphhs.mt.gov/PHSD/epidemiology/entericdiseases.shtml, and clicking on the "Exposure Questionnaire" link for the pathogen of interest.

Hepatitis A- The Utah Department of Health (UDH) and Salt Lake Valley Health Department (SLVHD) are investigating a confirmed case of hepatitis A virus (HAV) infection in a food handler who works at a restaurant in Salt Lake City, Utah. The affected food handler prepared food at the establishment, and concerns exist about hygiene. The investigation has determined that persons who ate at the following restaurant on the following dates may have been exposed:

- Quizno's located at 30 E. Broadway (300 South), Salt Lake City, Utah, 84111 during July 27–August 7, 2010

Persons who have been vaccinated against HAV or have had the illness in the past are protected from HAV infection. To reduce the risk of infection, persons who are not protected and who ate at the restaurant during the dates above should contact their health-care provider or their state or local health department to receive a dose of HAV vaccine or immune globulin (IG).

Prophylaxis Recommendations from the CDC (http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5641a3.htm)

INFORMATION / ANNOUNCEMENTS

Enteroviruses - Most people who are infected with enteroviruses either have no symptoms or only get a cold, rash, or mouth sores with low-grade fever. A small number of people with enterovirus infections develop meningitis. If you

suspect a case of viral or aseptic meningitis please submit CSF specimens to the Montana Public Health Laboratory for enterovirus testing by PCR. All specimens found negative will be further tested by viral culture.

Viral Meningitis– During the month of July, the MT DPHHS Communicable Disease Epidemiology program received higher numbers of aseptic and viral meningitis case reports compared to recent years. During the month of July 2010, 9 cases were reported, compared to 2 cases in July, 2009, and four cases total in June and July, 2008. Concurrently, the Canadian province of Alberta is reporting higher than normal levels of viral meningitis often related to sports tournaments and recreational activities. With the start of school approaching, it is important to stay home if ill, and keep ill children home as well. Different viral infections can lead to viral meningitis. Most cases in the United States, particularly during the summer and fall months, are caused by

Rabies - Rabies is a preventable viral disease of mammals most often transmitted through the bite of a rabid animal. The vast majority of rabies cases reported to DPHHS each year occur in wild animals like skunks and bats. Occasionally domestic animals like cats, dogs, and horses are infected. As of August 8th, 2010, DPHHS had received seven reports of rabies positive animals including six bats and one horse. Human exposure can occur through contact with the saliva of an infected wild or domestic animal. Rabies in humans is 100% preventable through prompt appropriate medical care and post exposure prophylaxis (PEP). However, the best way to prevent rabies is to avoid exposure by following a few simple steps:

- Vaccinate your pet
- Maintain control of your pets to reduce their exposure to wildlife
- Spay or neuter to decrease the number of stray animals
- Report any stray or ill animals to animal control
- Do not handle wildlife

If a human or domestic pet rabies exposure is suspected, contact your local health department or DPHHS for help in assessing the need for PEP. More information on rabies transmission to pets and humans can be found by visiting: http://www.cdc.gov/rabies/transmission/index.html
The ACIP PEP recommendations can be found by visiting:
http://www.cdc.gov/rabies/resources/acip_recommendations.html

DISEASE INFORMATION

Summary – MMWR Week 32 - Ending 8/14/10 – Disease reports received at DPHHS during the reporting period August 8 through August 14, 2010 included the following:

- Vaccine Preventable Diseases: Varicella (2)
- Invasive Disease: (0)
- Enteric Diseases: Campylobacteriosis (6), Giardiasis (7), Salmonellosis (7)
- Other Conditions: (0)
- Animal Rabies: (0)
- Travel Related Conditions: Dengue Fever (1)

Summary – MMWR Week 33 - Ending 8/21/10 – Disease reports received at DPHHS during the reporting period August 15 through August 21, 2010 included the following:

- Vaccine Preventable Diseases: Pertussis (1), Varicella (1)
- Invasive Disease: (0)
- Enteric Diseases: Campylobacteriosis (5), Cryptosporidiosis (2), *E. coli* O157:H7 (2), Giardiasis (2),

Salmonellosis (2), Shigellosis (1)

- Vector-borne: Colorado Tick Fever (1)
- Other Conditions: Viral meningitis (2)
- Animal Rabies: Bat (1)
- Travel Related Conditions: Dengue Fever (0)

NOTE: The attached report has multiple pages reflecting the following information: (1) vaccine preventable and enteric diseases YTD; (2) other communicable diseases YTD; (3) cases just this past reporting week; (4) clusters and outbreaks; and (5) an STD summary.

THE "BUZZ"

Deli meat recall – Zemco Industries, a Buffalo, N.Y., establishment, is recalling approximately 380,000 pounds of deli meat products that may be contaminated with *Listeria monocytogenes*, the U.S. Department of Agriculture's Food Safety and Inspection Service (FSIS) announced on 8/24/2010. These products were distributed to delicatessens where they were further processed into sandwiches. Listeriosis is a serious infection caused by eating food contaminated with the bacterium *L. monocytogenes*. The disease affects primarily persons of advanced age, pregnant women, newborns, and immunocompromised adults. A person with listeriosis has fever, muscle aches, and may also have gastrointestinal symptoms such as nausea or diarrhea. If infection spreads to the nervous system, symptoms such as headache, stiff neck, confusion, loss of balance, or convulsions can occur.
Infected pregnant women may experience only a mild, flu-like illness; however, infections during pregnancy can lead to miscarriage or stillbirth, premature delivery, or infection of the newborn.
Currently, there are no known cases of listeriosis in MT linked to the above recall.
For more information about the deli meat recall visit:
http://www.fsis.usda.gov/News_&_Events/Recall_049_2010_Release/index.asp
For more information about listeriosis, including prevention steps, visit:
http://www.cdc.gov/nczved/divisions/dfbmd/diseases/listeriosis/

INFORMATION / ANNOUNCEMENTS

Foodborne illness prevention– Pathogens that cause gastrointestinal illness can be transmitted through many different types of foods ranging from undercooked meat, poultry, and eggs, to an extensive list of produce and ingredients used in "ready to eat" foods. It is estimated that in the U.S. there are 76 million food-related illnesses a year, 325,000 hospitalizations and 5,000 deaths resulting in a national cost of around $152 billion a year. So, it is not surprising that food safety and public health officials are working to decrease the number foodborne illnesses by establishing industry guidelines and standards. In May, 2010 the USDA FSIS released the following guidelines to help meat and poultry producers reduce pathogen loads introduced to carcasses during processing:

1) "The third edition of the compliance guideline for controlling *Salmonella* and *Campylobacter* in Poultry" and
2) "The compliance guide on known practices for pre-harvest management to reduce *E. coli* O157:H7 contamination in cattle." Both include pre-harvest recommendations for controlling pathogens in livestock in an effort to reduce incidence of foodborne illness in humans. These guidelines can be viewed in their entirety by visiting: http://www.fsis.usda.gov/Significant_Guidance/index.asp

How did that *Salmonella* get into my egg? – It's a question often asked when human cases of salmonellosis related to eggs are detected. *Salmonella enterica serovar* Enteriditis is the most common type of *Salmonella* found in contaminated eggs. *Salmonella* bacteria are carried naturally in the intestines of many animals, including poultry, and are intermittently shed in the feces. Cross contamination of foods that are consumed raw or under cooked can cause gastrointestinal illness in humans. Given the manner in which *Salmonella* exit the animal host, it does not seem surprising that in the case of a chicken laying an egg, the surface of that egg may become contaminated. But, the contaminated egg scenario becomes more complex when in cases like that of the current egg recall, intact and disinfected grade A eggs are contaminated with *Salmonella* bacteria. When people become ill from eating surface disinfected eggs, it indicates that the bacteria are harbored within the egg. This type of egg contamination can occur in two ways: 1) by bacterial penetration of the egg shell from the colonized gut or from contaminated feces during or after egg laying, or 2) when *Salmonella* silently infects the ovaries of healthy appearing hens and contaminates the eggs before the shells are formed. Hens with *Salmonella* colonized ovaries remain healthy and only intermittently lay contaminated eggs. It is estimated that only around 1% of the eggs produced by infected flocks are contaminated.

TB Education – The Francis J. Curry National Tuberculosis Center has a web-based workshop that is good for anyone who is new to TB control or has limited experience in TB. These four, 2-hour sessions include an introduction to TB transmission and pathogenesis, tuberculin skin testing, diagnosis and management of TB disease and latent TB infection, contact investigation, infection control, and interviewing skills. Recorded sessions and handouts are available at: http://www.nationaltbcenter.edu/training/arch_tb101.cfm